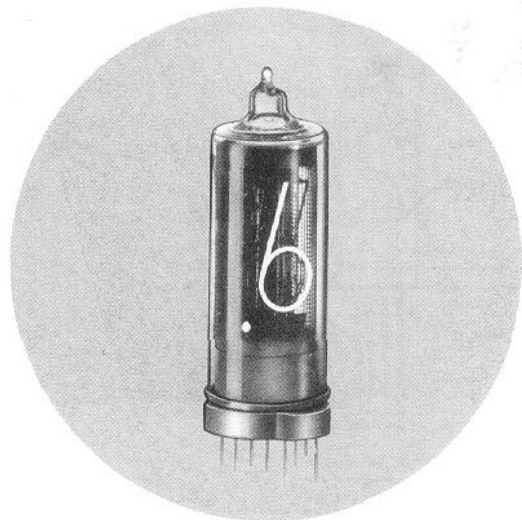


# NL-5750 AND NL-5750S NUMERICAL READOUT TUBES

The **NL-5750** is an ultra long life cold cathode numerical display tube. It has the capability of displaying numerals from 0 through 9. The NL-5750 has two independently operable decimal points, one to the left and one to the right of the numerals. The tube is designed to operate equally well in the normal dc mode or in the high peak low duty mode of a time share strobed application. The high peak current capability (15 ma) allows a clear bright display under low duty cycle conditions.

The **NL-5750S** is identical to the NL-5750 with the leads cut to 0.175"  $\pm$  .015" for use in the RTS-44 socket.



## TECHNICAL INFORMATION

|                                         |                                   |
|-----------------------------------------|-----------------------------------|
| Ionization Voltage (Maximum)            | 170 Vdc                           |
| <sup>1</sup> Supply Voltage (Minimum)   | 170 Vdc                           |
| Cathode Current                         |                                   |
| <sup>2</sup> Peak (Maximum) strobe only | 15 ma                             |
| Average (Maximum)                       | 3.8 mA                            |
| Average (Minimum)                       | 1.8 mA                            |
| Decimal Point Current                   |                                   |
| Average (Maximum)                       | 0.3 mA                            |
| Average (Minimum)                       | 0.1 mA                            |
| Prebias Limits                          | + 60V dc to +120V dc              |
| Temperature Limits                      | -20°C to +55°C                    |
| (Reduced Life)                          | -40°C to +70°C                    |
| Life (Dynamic)                          | 200,000 Hours                     |
| Weight                                  | 0.3 oz.                           |
| Mounting Position                       | Vertical with pins 6 & 7 in front |

### Recommended Operating Conditions: see figure 1.

|                                                                                                                                                                                                                           |               |               |               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|---------------|
| (a) No decimal point or decimal point operated only in conjunction with another character.                                                                                                                                |               |               |               |
| Supply Voltage ( $E_{bb}$ )                                                                                                                                                                                               | 170V dc       | 250V dc       | 300V dc       |
| Anode Resistor ( $R_p$ )                                                                                                                                                                                                  | 9.1K $\Omega$ | 43K $\Omega$  | 62K $\Omega$  |
| (b) When the decimal point is to be operated separately, with or without another character it is recommended an individual decimal point resistor be used in addition to the resistor in the anode circuit. See Figure 1. |               |               |               |
| Supply Voltage ( $E_{bb}$ )                                                                                                                                                                                               | 170V dc       | 250V dc       | 300V dc       |
| Anode Resistor ( $R_p$ )                                                                                                                                                                                                  | 9.1K $\Omega$ | 43K $\Omega$  | 62K $\Omega$  |
| Decimal Point Resistor ( $R_d$ )                                                                                                                                                                                          | 120K $\Omega$ | 560K $\Omega$ | 750K $\Omega$ |

Note: <sup>1</sup>Use of the highest voltage available with the appropriate resistor is recommended.

<sup>2</sup>Maximum pulse duration 5 milliseconds with maximum duty cycle of 10%.

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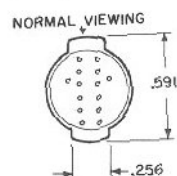
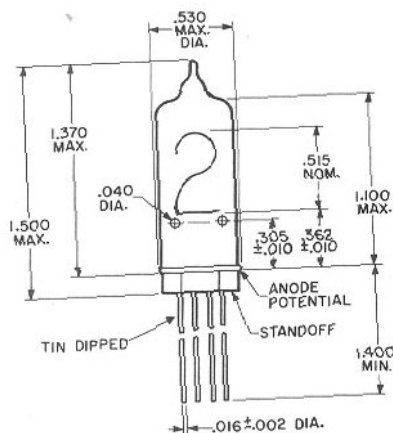
# NATIONAL ELECTRONICS, INC.

a varian subsidiary

GENEVA, ILLINOIS, 60134

TELEPHONE 312 232-4300  
TWX 910 237-1685

# NL-5750 AND NL-5750S NUMERICAL READOUT TUBES



OUTLINE DRAWING

NORMAL VIEWING

7 0 0 6  
8 0 0 5  
14 0 9 0 0 4 0 13  
10 0 0 3  
11 0 0 2  
12 0 0 1

(BOTTOM VIEW)

BASING DIAGRAM

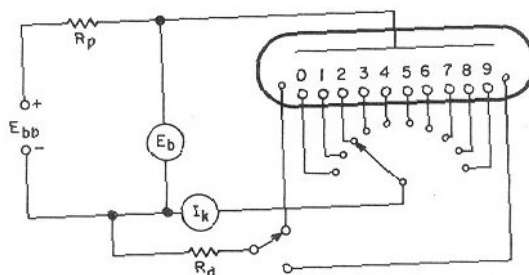
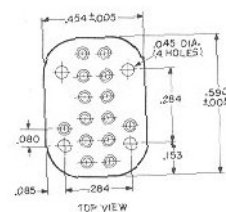


FIGURE 1

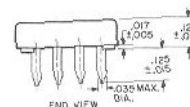
| Pin  | Connections   |
|------|---------------|
| 1    | NUMERAL 1     |
| 2    | NUMERAL 2     |
| 3    | NUMERAL 3     |
| 4    | NUMERAL 4     |
| 5    | NUMERAL 5     |
| 6    | NUMERAL 6     |
| * 7  | ANODE         |
| 8    | NUMERAL 7     |
| 9    | NUMERAL 8     |
| * 10 | ANODE         |
| 11   | NUMERAL 9     |
| 12   | NUMERAL 0     |
| 13   | RT. DEC. PT.  |
| 14   | LFT. DEC. PT. |

\*Connected internally.

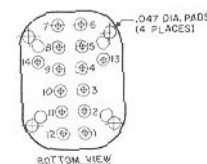
PIN CONNECTIONS



TOP VIEW

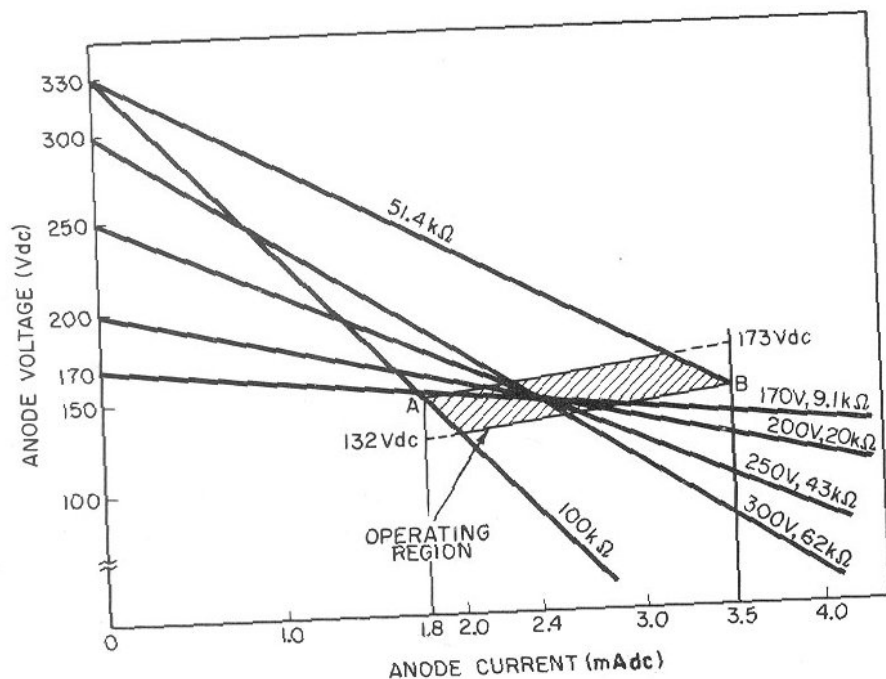


END VIEW

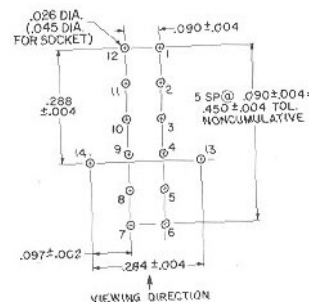


BOTTOM VIEW

RTS-44



TUBE CHARACTERISTICS



PRINTED CIRCUIT MOUNTING HOLE LAYOUT  
TOP VIEW

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